#### Resolving Too Big to Fail

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### Too Big to Fail and Living Wills

- Large financial institutions enjoy implicit TBTF guarantees
- Subsidizing downside risk causes artificially lower costs of capital
  - Transfer from taxpayers to investors
  - Incentives to take on more risk or grow beyond optimal scale
- Dodd-Frank implemented living wills as a policy solution
  - Large and complex financial institutions detail how they could unwind positions when distressed without systemic impact
- Effective living wills create conditions for orderly liquidation
  - Should lead to lower subsidies, and therefore higher costs of capital

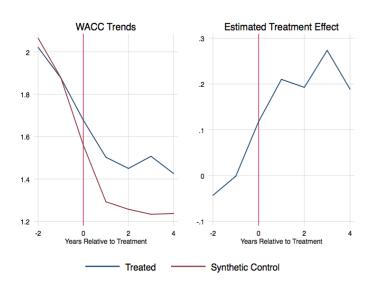
# **Empirical Strategy**

- Test whether living will regulations increase financing costs
  - May also decrease systematic risk by changing bank behavior, decreasing financing costs, so estimates are a lower bound
- Measure cost of capital using filings and analyst forecasts

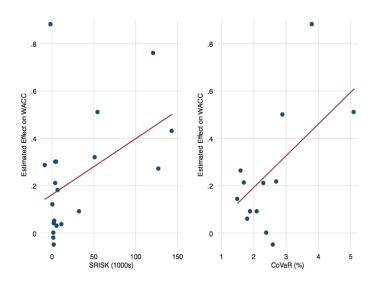
$$P = \sum_{t=1}^{\infty} \frac{E[CF_t]}{(1 + CEC)^t}$$

- Treated banks are larger and more complex than untreated banks
  - ... so we use a synthetic control approach to balance our comparison
- Also allows us to estimate a separate treatment effect for each bank!

## Increases in the Cost of Capital



# Stronger Effects in Systemically Important Banks



### Perspective on Economic Significance

- 22 bps cost increase is in the ball park of a TBTF subsidy
  - Typical estimates range from 20 bps to 100 bps
- \$42B implied subsidy is in the ball park of the Paulson plan transfer
  - Veronesi and Zingales (2010) estimate "...a massive transfer of resources from the taxpayers to the banking sector"
  - Benefits to bank investors of \$107B, costs to taxpayers about \$36B
  - Driven by a decrease in the perceived risk of bankruptcy
  - This bailout was a unitary event, our implied subsidy is annual